

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

21567

7590

02/13/2004

WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201 EXAMINER

POMPEY, RON EVERETT

ART UNIT PAPER NUMBER

2812

DATE MAILED: 02/13/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/332,271	06/11/1999	KLAUS FLORIAN SCHUEGRAF	MI22-532	2716

TITLE OF INVENTION: METHODS FOR FORMING WORDLINES, TRANSISTOR GATES, AND CONDUCTIVE INTERCONNECTS, AND WORDLINE, TRANSISTOR GATE, AND CONDUCTIVE INTERCONNECT STRUCTURES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$300	\$1630	05/13/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
- ☐ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- II. PART B FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

### PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

(703) 746-4000 or <u>Fax</u>

INSTRUCTIONS: This f appropriate. All further c indicated unless corrected maintenance fee notificati	form should be used for transforrespondence including the Pal below or directed otherwise is ons.	mitting the ISSUE atent, advance ord n Block I, by (a)	E FEE and PUBLIC lers and notification specifying a new co	CATION FEE (if requestion of maintenance fees orrespondence address	uired). Blocks I through 4 si will be mailed to the current s; and/or (b) indicating a sepa	hould be completed where correspondence address as trate "FEE ADDRESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must		
	7590 02/13/2004			have its own certifica	te of mailing or transmission.	
WELLS ST. JO 601 W. FIRST A' SPOKANE, WA	VENUE, SUITE 1300			I hereby certify that to States Postal Service addressed to the Ma	ertificate of Mailing or Trans this Fee(s) Transmittal is being with sufficient postage for fir ail Stop ISSUE FEE address PTO, on the date indicated bel	g deposited with the United st class mail in an envelope above, or being facsimile
						(Depositor's name)
						(Signature)
				-	-	(Date)
APPLICATION NO.	FILING DATE	F	IRST NAMED INVEN	TOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/332,271	06/11/1999		US FLORIAN SCH		MI22-532	2716
	N: METHODS FOR FORMI ND CONDUCTIVE INTERCOI			GATES, AND CO	NDUCTIVE INTERCONNE	CTS, AND WORDLINE,
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nonprovisional	NO	\$1330		\$300	\$1630	05/13/2004
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	RON EVERETT	2812	1 (	438-592000	J	
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Address form PTO/SB/	dence address (or Change of Co (122) attached. ation (or "Fee Address" Indication for more recent) attached. Use	on form	firm (having as a agent) and the na	atively, (2) the name member a registered mes of up to 2 regis ts. If no name is liste	attorney or 2stered patent	
	ID RESIDENCE DATA TO BE ss an assignee is identified belo ted to the USPTO or is being su NEE	w, no assignee da bmitted under sep	ta will appear on the arate cover. Comple	•• •		ate when an assignment has ignment.
Please check the appropria	ate assignee category or categori	es (will not be prin	nted on the patent):	☐ individual ☐	corporation or other private gr	roup entity 🚨 government
4a. The following fee(s) as		, ,	Payment of Fee(s):		1 5	
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☐ Publication Fee				card. Form PTO-203		
☐ Advance Order - # o	of Copies		The Director is h Deposit Account Nu	ereby authorized by omber	charge the required fee(s), or (enclose an extra c	
Director for Patents is requ	uested to apply the Issue Fee and	l Publication Fee (	(if any) or to re-apply	any previously paid	issue fee to the application ide	ntified above.
(Authorized Signature)		(Date)				
other than the applicant interest as shown by the	and Publication Fee (if required ;; a registered attorney or ager records of the United States Pate	nt; or the assigned ent and Trademark	e or other party in Coffice.			
Under the Paperwork I	nation is required by 37 CFR lit by the public which is to file ity is governed by 35 U.S.C. 12 butes to complete, including gat form to the USPTO. Time will not the amount of time you re this burden, should be sent to Office, U.S. Department of SEND FEES OR COMPLET er for Patents, Alexandria, Virgi Reduction Act of 1995, no per unless it displays a valid OMB	ersons are require	ation is required to PTO to process) an 4. This collection is and submitting the apon the individual e this form and/or nation Officer, U.S. lexandria, Virginia THIS ADDRESS.			·



### UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

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09/332,271	09/332,271 06/11/1999		KLAUS FLORIAN SCHUEGRAF	MI22-532	2716
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WELLS ST. JOHN P.S.		•	POMPEY, RON EVERETT		
601 W. FIRST SPOKANE, W.		, SUITE 1300		ART UNIT	PAPER NUMBER
,,,,,				2812	
				DATE MAILED: 02/13/200-	4

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

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	Application No.	Applicant(s)				
	09/332,271 🕖	SCHUEGRAF ET A	SCHUEGRAF ET AL.			
Notice of Allowability	Examiner	Art Unit				
	Ron E Pompey	2812				
The MAILING DATE of this communication appeal All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R	(OR REMAINS) CLOSED in or other appropriate commits (IGHTS). This application is	n this application. If not include unication will be mailed in due	ed course. <b>THIS</b>			
<ol> <li>This communication is responsive to 12-12-03.</li> <li>The allowed claim(s) is/are 41-57.</li> <li>The drawings filed on 11 June 1999 are accepted by the E</li> <li>Acknowledgment is made of a claim for foreign priority ur</li> <li>a) All b) Some* c) None of the:         <ol> <li>Certified copies of the priority documents have</li> <li>Certified copies of the priority documents have</li> <li>Copies of the certified copies of the priority do</li> </ol> </li> </ol>	nder 35 U.S.C. § 119(a)-(d)  be been received.  be been received in Applicati	on No	 tion from the			
International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:  5. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  (a) The translation of the foreign language provisional application has been received.  6. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.						
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.  7. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.						
<ul> <li>8.  CORRECTED DRAWINGS (as "replacement sheets") mus (a) including changes required by the Notice of Draftspers 1) hereto or 2) to Paper No</li> <li>(b) including changes required by the proposed drawing composed composed composed drawing composed composed composed composed composed drawing composed c</li></ul>	et be submitted.  son's Patent Drawing Revie  correction filed, which	w ( PTO-948) attached ch has been approved by the E				
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t	.84(c)) should be written on the margin according to 37 C	the drawings in the front (not the FR 1.121(d).	back) of			
9. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.						
Attachment(s)		•				
1⊠ Notice of References Cited (PTO-892) 2□ Notice of Draftperson's Patent Drawing Review (PTO-948) 3□ Information Disclosure Statements (PTO-1449 or PTO/SB/08 Paper No 4□ Examiner's Comment Regarding Requirement for Deposit of Biological Material	6☐ Interview Su  7☐ Examiner's	ormal Patent Application (PTO Immary (PTO-413), Paper No. Amendment/Comment Statement of Reasons for Allov				

Application/Control Number: 09/332,271

Art Unit: 2812

### **DETAILED ACTION**

## Allowable Subject Matter

- 1. Claims 41-57 are allowed.
- 2. The following is an examiner's statement of reasons for allowance: The prior art of record, either singly or in combination, fails to disclose the limitations of: out diffusing dopant from the silicon comprising layer to the silicide-comprising layer to provide the dopant to within the silicide-comprising layer to a concentration of at least 1X10<sup>18</sup> ions/cm<sup>3</sup>; and after the out diffusing, etching the silicon-comprising layer and the silicide-comprising layer into a conductive line shape;

Or

While the dopant concentration in the silicide-comprising layer is less than 1 X10<sup>18</sup> ions/cm<sup>3</sup>, etching the silicon-comprising layer and the silicide-comprising layer into a conductive line shape; and after the etching, providing dopant within the silicide-comprising layer to a concentration greater than 1X10<sup>18</sup> ions/cm<sup>3</sup>.

These limitations in combination with the other limitations of claims 41 and 49 respectively were not found in the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2812

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ron E Pompey whose telephone number is (571) 272-1680. The examiner can normally be reached on flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (703) 308-3325. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-

0956.

Supervisory Patent Exeminer Technology Center 2800

Ron Pompey Art Unit: 2812 February 9, 2004